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FAX TRANSMITTAL

DATE:	10-14-02
PROJECT:	BNSF RAILYARD REMEDIAL ACTION
TO:	MR. DUC NGUYEN, OSC
COMPANY:	USEPA REGION 8 EMERGENCY RESPONSE PROGRAM
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COMMENTS

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October 11, 2002

Mr. Duc Nguyen, OSC
On-Scene Coordinator
USEPA Region 8 Emergency Response Program
501 Mineral Avenue
Libby, MT 59923

SUBJECT: Response to EPA Comments on the Remedial Action Work Plan and Health and Safety Plan – BNSF Libby Railyard Biotite Removal, Libby, Montana
EMR Project No. 5539.002-1

Dear Mr. Nguyen,

On behalf of the Burlington Northern and Santa Fe Railway Company (BNSF) EMR is responding to review comments in your October 3, 2002 letter. Our tentative start date for commencing with remedial action activities is scheduled for October 21, 2002. This is contingent on final review and approval of our response to comments, Final Remedial Action Plan (FRAP) and Health and Safety Plan (HASP) documents, as well as signing of the Administrative Order on Consent (AOC).

Opening paragraph:

"In general, the submitted documents lack sufficient detail to adequately evaluate the planned approach".

Response: This 'Response to Comments' letter attempts to explain portions of the scope of work that were not discussed in detail in the remedial action or health and safety plans. The project detail is contained in our "Project Design Specifications" document. This document follows the industry standard "Model Asbestos Abatement Guide Specification," National Institute of Building Sciences." Portions of the specification not applicable to the planned remedial action will be removed. The specification document will be available to USEPA for reference, as required. However, as we understand, approval of the remedial action and signing of the Administrative Order on Consent (AOC) is not contingent on review of the "Project Design Specifications" document.

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Section 1: General Comments

Item #1 Removal Criteria

Bullet No. 1: all visible amphibole asbestos materials will be removed.

Response: visible hydrated biotite will be removed.

Bullet No. 2 comment addressing 6-inch depth of soil sampling

Response: Following removal of visible hydrated biotite, soil samples will be collected along sections of track where visible biotite was removed. Soil samples will be collected from a depth of 2 to 4 inches (or greater) depending on the depth that visible hydrated biotite was removed. If visible hydrated biotite is persistent, it will be removed to a point up until it is determined that additional removal may undermine rail and ties. Soil samples will be collected at 50-foot intervals along tracks identified as having visible hydrated biotite as shown in the work plan site figures. Four 50 foot discrete samples will be submitted to the laboratory with instructions to "hold" until laboratory analysis of a 200 linear feet composite sample (of the four discrete 50 foot samples) is conducted. If this composite sample contains trace amounts (<1%) of Libby amphibole by the PLM method, the laboratory will be instructed to analyze the individual 50 foot discrete samples.

Upon receipt of laboratory analysis of the discrete samples, samples containing trace (<1%) or greater concentrations of Libby amphibole will be addressed by re-vacuuming areas that these samples represent. This will consist of vacuum removal of additional soils to a depth of 6 inches on and around the track 25 feet west and 25 feet east of the sample. If confirmatory sampling of this area at 6-inches depth still shows persistent Libby amphibole, the vacuum removal will continue to a depth of 1 foot (or up to a depth where additional removal could undermine rail and ties), and a new confirmatory sample will be collected.

To confirm the entire right-of-way contains no surface or near surface Libby amphibole, a grid sampling approach will be used as conducted previously in our October 2001 investigation. The grid and sampling scheme shown in the Figure 1 and Figure 2 Site Drawings will be utilized and extended to the remaining BNSF right-of-way, this will consist of a grid on 100 foot spacings with 5 discrete soil samples and one composite sample (consisting of a portion of the 5 discrete soil samples) submitted for laboratory analysis by PLM. The grid sampling will be accomplished prior to demobilization of the vacuum truck equipment.

This Final Remedial Action Plan (FRAP) has not defined removal based upon an arbitrary depth. The 2-inch depth is the depth that is most practical for vacuum removal, however removal will continue as necessary to remove visible hydrated biotite up to a depth where continued removal may compromise the stability of railroad ties and track.

Item 2 – Investigation and Removal Boundary

"Therefore the boundary for the investigation and removal activities will encompass from BNRR's rail yard and its tracks to the Bluffs' loading station (across the former Screening Plant), and from BNRR's right-of-way to right-of-way (easement)."
Response: The planned final remedial action addresses only the rail yard area. The right-of-way area between the rail yard and the Bluffs' loading station was previously characterized under separate investigation. Analytical results show no asbestos impacts. This investigation and report was forwarded to EPA Region 8. The date of the report is May 4, 2001.

Item 3 – Implementation Schedule
All removal actions including additional sampling/investigation as described in the Work Plan must be implemented or carried out by the end of December 2002.

Response: Upon EPA approval of the work plan and signing of Administrative Order on Consent (AOC), work will be completed by the end of December 2002, weather permitting.

Item 4 – Components to be Included in the Work Plan

Bullet #1 Dust Erosion/Engineering Control

Response: A self contained vacuum truck equipped with HEPA filtration and a water truck will be used to keep dust emissions under control. Water run-off is not expected as the vacuum truck will immediately remove any accumulated water. This information will be summarized in the work plan.

Bullet #2: Decontamination Facilities

Response: a portable decontamination trailer with 3 stations consisting of clean (or change) room, shower, and equipment (or dirty) room will be set-up on the north side of the railyard east of the overpass. The vacuum truck driver and workers on the ground with the vacuum hose will be double suited in disposable TyvekR suits and respiratory protection. At the edge of the exclusion zone (EZ) there will be a boot wash/rinse station. Workers exit the EZ, rinse their boots, and take off their outer tyvek, walk through the Contamination Reduction Zone (CRZ) and then proceed directly to the decontamination trailer This information will be summarized in the Final Remedial Action Work Plan.

The EZs, CRZs, decontamination trailer, and boot wash/rinse stations will be represented on the Site Plan Figures 1 and 2 of the Final Remedial Action Work Plan.

Bullet #3 Operation and Maintenance

Response: Following vacuum removal of visible hydrated biotite and confirmation soil sampling along stretches of track impacted with visible hydrated biotite, final grid soil sampling will be accomplished in areas of the yard not already evaluated in our October 2001 investigation (Site Plan Figures 1 and Figure 2). If confirmation soil samples indicate no detectable Libby amphibole, no additional Operation and Maintenance is required.

Bullet#4 Federal and State ARARs

Response: Applicable federal and state ARARs will be described in the Final Remedial Action Work Plan.

Bullet #5 Reporting and Coordinating Activities

Response: Comment noted.

Bullet #6 Key Personnel Resumes

Response: As requested, the Final Remedial Action Work Plan will contain an appendix with resumes of key project personnel.

Bullet #7 Final Site Restoration

Response: This will be handled by BNSF forces after confirmation soil samples indicate no impacts to soil by Libby amphibole. It is expected that fresh railroad ballast material will be the site restoration material, where required.

Bullet #8 Additional Removals Action Work Plan

Response: Comment noted.

Section II: Document-Specific Comments:

Opening paragraph:

"In general, this is not a planned Interim Remedial Action (IRA) as indicated in the Executive Summary"

Response: Duly noted. The work plan name will be revised to be considered a Final Remedial Action Plan (FRAP).

"The 'hydrated biotite' should be replaced throughout the document.

Response: The term hydrated biotite is meant to include the minerals biotite, vermiculite and hydrobiotite, all of which are found interstratified in the Libby, Montana, ore that is processed into thermally exfoliated vermiculite. We request that this terminology remain.

Section 1.0 (Introduction)

Number 1: There is a concern that the final remedial action does not address impact to railroad ballast material.

Response: The vacuum pressure exerted by the vacuum truck equipment with HEPA filtration is such that particles of hydrated biotite or amphibole will be pulled through and around the

ballast (rock) material. The ballast in a sense will be "rinsed" by water and vacuum pressure and as such should not require removal.

Number 2: "one half inch screen will be used to prevent the collection of gravels or cobbles"

Response: The ballast will be screened out with a ½-inch mesh screen (See comment above).
Section 1.1.1

Number 1: Analytical method for confirmation soil sampling

Response: the Libby Amphibole (LA) asbestos (tremolite/actinolite series) by PLM (Method 9002, Issue 2 confirmatory soil sampling analysis methods will be stated in the FRAP.

Number 2: Section 3.2

Response: this number was inadvertently transposed. The number should be 2.3. This change will be made in final revisions to the FRAP.

Section 1.1.2

Number 1: Zones identified on attached figures.

Response: The change will be made on final revisions to the FRAP.

Number 2: Section 2.1.1.1

Response: The reference to this section was a typographical error. The details regarding personal decontamination procedures will be described in the FRAP document and is summarized in the above response to Item #4 (Items to be included in Work Plan).

Bullet #2

Number 3: Confusion over different zones within the removal area.

Response: This will be re-clarified. There will be three zones established: 1) the Exclusion Zone (EZ), 2) the Contamination Reduction Zone (CRZ) that includes the decontamination equipment; and 3) the Project Site. The EZ will be demarcated by traffic cones or asbestos caution tape. This area will require Level C PPE. A corridor to link the EZ to the decontamination area will be marked with traffic cones. The project site will consist of the entire BNSF right-of-way. This area will be posted to keep unauthorized personnel off the project site and requires Level D personal protective equipment consistent with BNSF Safety Rules.

These zones will also be sketched on the Site Plan Figures 1 and 2 as well as within the Health and Safety Plan (HASP).

Section 1.1.3

Item #1: "Who will verify that the equipment has been sufficiently decontaminated?

Response: The EMR on-site representative

Item #2: No section 2.1.1 describing equipment decontamination.

Response: The equipment decontamination protocol is listed in section 2.1.2 of the Health and Safety Plan (HASP).

Section 1.2.3

Item #1. It would be more efficient and limit the possibility of releasing contamination if the vacuum truck box were set-up "in-line" so the material was placed directly into the vacuum box. This will require no transfer of vacuumed material from the truck to the box.

Response: During the October 9, 2002 site meeting with project personnel, including USEPA representatives, this issue was discussed and it was decided that the boxes would not be put in-line. Arguments against putting the boxes in-line were as follows:

- *The contractor was concerned about dragging heavy vacuum hose 100 feet or more to accomplish their work.*
- *There was an added cost associated with using the disposable vacuum boxes that is considerable, especially when the volume of soil to be removed is considered.*
- *Most important, remediation could not take place on Tracks 1 and 2 (tracks in the southern part of the yard) with this method because Tracks 3 and 4 (tracks on the north part of the yard) need to be kept open for rail car switching.*

The following procedures were agreed on during the October 9, pre-construction meeting:

> *The soil will be augered from the vacuum trucks inside a vacuum hose into a 30 cubic yard steel dumpster lined with 6 mil plastic sheeting: it will not be blown into a container for disposal as was previously thought. Therefore, the positive pressure situation that was anticipated will not occur and the enclosure for soil transfer is not needed.*
>
> *Instead of an enclosure, the dumpster lining will extend outside and overlap the sides of the dumpster in a manner so that these flaps can be sealed for transfer and disposal. An additional sheet of plastic will be secured to the liner plastic on the edges of the dumpster providing a roof over the lined dumpster. The vacuum truck hose will be put through an opening cut in the "roof" and the soil will be augered into the dumpster.*
>
> *The contractor will install a HEPA-filtered exhaust machine to remove air from the dumpster during soil transfer. The dumpster will not be under negative pressure as is typical for the industry (-0.2 inches of water column) rather the exhaust will be used to ensure a positive pressure does not develop from the transfer and to filter any particulate that is generated during transfer process. The air filtration units have a*

variable rate of exhaust and the rate of exhaust will be adjusted so that the air inside the box is removed, but not so great that the plastic lining is damaged or pulls away from the interior of the dumpster.

The soil will be wetted as it is collected. Additionally, the contractor stated that they will wet the soil in the truck prior to transfer and that it will be wetted as needed as the soil passes through the flexible hose into the dumpster.

The dumpsters will be parked on the Contamination Control Line so that the vacuum trucks can transfer their soil while inside the CRZ and the truck hauling the soil can remove the dumpster without entering the CRZ.

Air samples will be collected initially to study any potential airborne asbestos fiber concentrations generated inside the dumpster and outside the dumpster barriers. If concentrations less than 0.01 f/cc are detected inside and outside the dumpster barrier, the air filtration may be eliminated. However, air filtration will not be eliminated without reviewing the sampling data with the EPA on-site representatives and arriving at a mutual agreement regarding removal of the air filtration machines.

Section 1.3.1

Item #1: What will be the disposition of soils that contain visible hydrated biotite that cannot be removed by vacuum truck?

Response: visible hydrated biotite will be removed to a depth practical to assure ties and rail will not be undermined. It is estimated that this depth will range between 2 inches and 1 foot below grade. If depth of visible hydrated biotite is such that the vacuum truck cannot remove because of undermining rail and ties, and confirmation soil samples indicate trace or higher concentrations of Libby amphibole, then an addendum will be prepared to the Final Remedial Action Plan to address the disposition of these soils.

Item #2: How will dust suppression be accomplished?

Response: Dust suppression is outlined in Section 2.2 of the Health and Safety Plan. The HEPA filtration system within the vacuum truck will capture dust that may be generated during vacuuming. Additionally, soil will be wetted prior and during collection thus minimizing the potential for dust generation. The vacuum truck has a 1,000 gallon water reservoir built-in; if any additional water is required, a water truck will be utilized.

Section 1.3.2

Item #1: Paragraph referencing Section 2.1.1.2. Section not present in document.

Response: Duly noted, this reference will be removed from work plan document.

Section 2.2:

Item #1: No description of personal air monitoring analysis:
Response: In general the NIOSH 7400 method will be used for personal air sample analysis. In addition, we plan to submit approximately 50 percent of the initial samples (samples collected over the first three days of vacuuming) for TEM analysis by the NIOSH 7402 method. The number of samples submitted for TEM analysis may be increased or decreased depending on the initial sampling data.

An analyst participating in the AIHA round robin program and listed in AIHA's Asbestos Analysts Registry (AAR) will conduct analysis of on-site personal samples on a daily basis.

Item #2: How will the five perimeter monitoring sites be selected? Will this be able to meet the requirement of this SAP and adequately monitor airborne asbestos in the residential setting?

Response: The five perimeter monitoring sites will be selected based on available wind speed and direction information data from a weather station installed on the outside of the BNSF Section House in the southwest corner of the rail yard. This data will be checked twice daily to verify wind speed and direction information. In addition, each vacuum truck will have a windsock placed on the vehicle to indicate wind direction changes on a continuous basis. Should the wind shift, an additional sample will be installed in the new downwind direction to accommodate the wind shift.

There will be two upwind and three downwind sampling stations for each EZ pursuant to the EPA SOP Number 2015.

Two additional air sampling stations will be established between the soil transfer area and the residences to the north. Sampling at these stations will include periods of soil transfer at a minimum.

Item #3 The SAP mentions 3 air monitoring stations located downwind and 2 upwind. Section addressing how wind speed and direction will be logged? SAP should include minimum volume to obtain the desired limit of detection of the ambient air samples and test method.

Response: One set of 5 air monitoring stations will be set up per day per EZ. The wind speed and direction will be evaluated twice daily from an electronic weather station installed on the exterior of the BNSF Section house in the southwest corner of the railyard. Wind direction will be continuously evaluated using a windsock attached to each vacuum truck. If the windsock indicates a shift in wind direction of 90 or 180 degrees for a sustained period of time, an additional sampling station will be placed in the new downwind direction. Based on the air pumps specified for the project and expected hours of operation (daylight hours with 10 to 12-hour shifts) each perimeter air sample is expected to draw a minimum of 1200 liters in order to achieve the desired detection limits for the NIOSH 7402 and NIOSH 7400 methods.

Item #4: What is the action level in which corrective action will take place based on the sampling results?

Response: 0.1 fibers/cubic centimeter (f/cc) inside the Exclusion Zone and 0.01 f/cc on the perimeter of the Exclusion Zone.

Item #5: What type of equipment will be used to collect air samples?

Response: AP Buck Super High Flow Personal Sampling Pumps, Buck Basic-12

Section 2.3

Item #1: Confirmatory sampling is unclear. How will composite samples be collected? Sampling protocol is also unclear.

Response: Confirmatory sampling will take place in areas following removal by collecting discrete samples at 50 foot intervals along each rail line and compositing four such samples (ie. one composite sample per 200 feet of track length).

At the end of the project but prior to demobilization of vacuum truck equipment, a 100 foot spacing grid system will be surveyed and sampling will be accomplished in similar fashion to our October 2001 investigation. This will consist of collecting 5 discrete soil samples within each grid (NE, NW, SE, SW and Center) from a depth of 6-inches. The discrete and composite samples will be sent to the laboratory. Upon receipt at the laboratory, the discrete samples would be held pending analysis of the composite samples. If Libby amphibole is detected by PLM in the composite samples, the discrete samples will be analyzed to determine which discrete samples within the grid contain Libby amphibole. A 25-foot radius around the location of each discrete sample location (excluding previously sampled areas) where Libby amphibole was detected will be vacuumed a second time. New confirmatory samples will be collected to a depth of 1 foot or to a lesser depth considered to maintain the integrity of rail and ties. If these new confirmatory samples contain Libby amphibole, vacuuming and testing will continue until Libby amphibole is not detected or until the limit of maintaining track and rail integrity. If there are areas that cannot be cleaned, an addendum to the work plan will be prepared to address the disposition of these soils.

Item #2: The text states that each soil sample will be collected at 50 feet intervals will be the result of a four point composite. What is the anticipated distance between four discrete samples?

Response: The composite will represent four (4) discrete samples taken 50 feet apart for a total composite distance of 200 feet.

Item #3: What sampling equipment decontamination measures will be employed?

Response: Soil sampling equipment decontamination will be as listed under the USEPA Quality Analysis and Program Plan (QAPP) for the Libby mine project as covered under surface soil sampling, Appendix 3, Section 5.2.3 of the QAPP. This section will be submitted as Appendix B in our Final Remedial Action Work Plan.

Item #4: "Sample analysis will be by others".

Response: At this time TEM air (NIOSH 7402) samples will be analyzed by either Clayton Laboratories, Inc. of Atlanta, Georgia or EMSL Laboratories through CDM Federal Programs Corporation and PLM soil samples (Libby Amphibole-Method 9002, Issue 2) will be analyzed by EMSL Laboratories through CDM Federal Programs Corporation.

EMR hopes that these responses to comments meet with EPA's approval on this project. If, you have any questions after reviewing these comments, please call me at (800) 275-3516.

Best Regards,

David L. Welch
Project Geologist

cc: Dave Smith, BNSF; Mark Mitchell, BNSF; Dan Westrum, Environmental Health, Inc.; Don Clabaugh EMR